CLAIMS

What is claimed is:

1.   A method for cancelling acoustic feedback in hearing aids, comprising the steps of:

digitizing an audio signal into a sequence of digital audio samples;

5   splitting said sequence of digital audio samples in an analysis filter bank into a plurality of subband signals;

processing each of said subband signals separately with a noise reduction and hearing loss compensation algorithm into a plurality of processed subband signals;

combining said processed subband signals into a single processed digital signal;

10   converting said processed digital signal into an output audio signal;

splitting said processed digital signal into a plurality of processed digital signals;

filtering each of said processed digital signals with a narrow-band training filter that models the static portion of the feedback path in each of said subbands and provides an output thereof;

15   filtering each said output of said narrow-band training filter with a narrow-band tracking filter that tracks the variations of the feedback path in each of said subbands, and provides an output thereof and;

subtracting said output of each of said narrow-band tracking filters from the corresponding subband signals at the output of said analysis filter bank.